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Application No.: 10/699,323

Docket No.: MWS-089

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of building a diagram, comprising the steps of:
receiving an ~~user~~ input for selecting a first graphical object in the an executable block diagram representing a system, the first graphical object having one or more properties; and
displaying to a user a plurality list of one or more transformation operations to be performed-performable on the selected-first graphical object for transforming the first graphical object into a second graphical object for the executable block diagram;
receiving an input for selecting one of the one or more transformation operations; and
applying the selected one of the one or more transformation operations on the first graphical object for creating ~~thea~~ second graphical object, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object-derived from the selected graphical object.
2. (Currently Amended) The method of claim 1, wherein the plurality list of transformation operations ~~are-is~~ displayed in one of a context menu, a toolbar ~~and-or~~ a roll-up menu.
3. (Currently Amended) The method of claim 1, wherein the first graphical object is selected ~~user input indicates that the user has selected the graphical object by moving a pointer over the first graphical object.~~
4. (Canceled)
5. (Canceled)
6. (Currently Amended) The method of claim ~~[[5]]~~ 1, wherein the transformed-second graphical object is created in the executable block diagram.
7. (Currently Amended) The method of claim ~~[[5]]~~ 1, wherein the transformed-second graphical object has a class that is different class from a class of the selected-first graphical object.

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8. (Currently Amended) The method of claim ~~[[7]]~~ 1, wherein the ~~transformed-second~~ graphical object is an instance of a superclass of the ~~selected-first~~ graphical object.
9. (Currently Amended) The method of claim ~~[[7]]~~ 1, wherein the ~~transformed-second~~ graphical object is an instance of a subclass of the ~~selected-first~~ graphical object.
10. (Currently Amended) The method of claim ~~[[5]]~~ 1, wherein the ~~transformed-second~~ graphical object shares a base class with the ~~selected-first~~ graphical object.
11. (Canceled)
12. (Currently Amended) The method of claim ~~[[2]]~~ 1, wherein the selected transformation operation is a copy and morph operation, ~~wherein the transformed-graphical object has one or more properties that are different from the selected-graphical object.~~
13. (Currently Amended) The method of claim ~~[[12]]~~ 1, wherein the ~~transformed-second~~ graphical object is a signal tap block for tapping a signal from the ~~selected-first~~ graphical object.
14. (Currently Amended) The method of claim 13, wherein the ~~selected-first~~ graphical object is a block having an output that represents the signal.
15. (Currently Amended) The method of claim 13, wherein the ~~selected-first~~ graphical object is a line representing the signal.
16. (Currently Amended) The method of claim ~~[[12]]~~ 1, wherein the ~~selected-first~~ graphical object and the ~~transformed-second~~ graphical object are functionally related blocks.
17. (Currently Amended) The method of claim ~~[[16]]~~ 1, wherein the ~~selected-first~~ graphical object and the ~~transformed-second~~ graphical object are one of source blocks ~~and or~~ sink blocks.
18. (Currently Amended) The method of claim ~~[[12]]~~ 1, wherein the ~~transformed-second~~ graphical object is an inverse graphical object of the ~~selected-first~~ graphical object.

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19. (Currently Amended) The method of claim [[18]] 1, wherein one of ~~said the transformed second graphical object and/or said selected the first~~ graphical object is a bus creator block and the other of ~~said transformed the second graphical object and said selected the first~~ graphical object is a bus selector block.

20. (Canceled)

21. (Currently Amended) The method of claim [[20]] 1, wherein the ~~transformed second~~ graphical object has one or more implicit links to the ~~selected first~~ graphical object.

22. (Canceled)

23. (Currently Amended) The method of claim [[5]] 1, further comprising; ~~wherein the step of executing the selected transformation operation comprises~~
executing a customized transformation operation ~~created by a user~~.

24. (Currently Amended) A method ~~of building a diagram~~, comprising the steps of:
receiving an user input for selecting a first graphical object in the an executable block diagram representing a system, the first graphical object having one or more properties; and
displaying a list of one or more transformation operations performable on the first
graphical object;
receiving an input for selecting a transformation operation in the list; and
based on the selected transformation operations, executing a copy and morph operation
on the first graphical object to create a second graphical object for the executable block diagram,
~~derived from the first graphical object, wherein the second graphical object automatically has~~
having one or more properties that are different than from the one or more properties of the first
graphical object.

25. (Currently Amended) The method of claim 24, wherein the ~~selected first~~ graphical object ~~is a block outputting outputs~~ a signal, and wherein the step of executing a the copy and morph operation further comprises;

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creating a signal tap block for tapping the signal.

26. (Currently Amended) The method of claim 24, wherein the ~~selected-first~~ graphical object is a line representing a signal, and ~~wherein the step of executing a-the~~ copy and morph operation further comprises:

creating a signal tap block for tapping the signal.

27. (Currently Amended) The method of claim 24, wherein the ~~selected-first~~ graphical object and the ~~transformed-second~~ graphical object are functionally related blocks.

28. (Currently Amended) The method of claim ~~[[27]]~~ 24, wherein the ~~selected-first~~ graphical object and the ~~transformed-second~~ graphical object are source blocks.

29. (Currently Amended) The method of claim 24, wherein the ~~transformed-second~~ graphical object is an inverse graphical object of the ~~selected-first~~ graphical object.

30. (Currently Amended) The method of claim ~~[[29]]~~ 24, wherein one of ~~said-the~~ ~~transformed-second~~ graphical object ~~or and said-the~~ ~~selected-first~~ graphical object is a bus creator block and the other of ~~said-the~~ ~~transformed-second~~ graphical object and ~~said-the~~ ~~selected-first~~ graphical object is a bus selector block.

31. (Canceled)

32. (Currently Amended) The method of claim ~~[[31]]~~ 24, wherein ~~the step of selecting comprises selecting a copy and morph operation the list is displayed in one of a context menu, a toolbar or a roll-up menu from a context menu displaying a plurality of transformation operations to the user.~~

33. (Currently Amended) The method of claim 24, further comprising:
~~the step of receiving a user command associated with a-the~~ copy and morph operation ~~prior to the step of executing the copy and morph operation.~~

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34. (Currently Amended) The method of claim 33, wherein ~~the user enters the command is~~ received from using a command line mechanism.

35. (Canceled)

36. (Canceled)

37. (Currently Amended) ~~A method of building a graphical diagram, comprising the steps of:~~

receiving an user input for selecting a graphical object in an executable graphical block diagram representing a system, the selected graphical object having one or more properties; and displaying a list of one or more transformation operations performable on the selected graphical object;

receiving an input for selecting a transformation operation from the list; and based on the selected transformation operation, executing a morph operation on the selected graphical object to change one or more properties of the selected graphical object; thereby creating a transformed graphical object derived from the selected graphical object.

38. (Currently Amended) The method of claim 37, wherein ~~the step of executing the morph operation~~ further comprises:

morphing the selected graphical object to a signal tap block for tapping a signal.

39. (Currently Amended) The method of claim 37, wherein ~~the step of executing the morph operating operation~~ further comprises:

morphing the selected graphical object into a functionally related graphical object.

40. (Currently Amended) The method of claim 37, wherein ~~the step of executing the morph operating operation~~ further comprises:

morphing the selected graphical object into an inverse graphical object.

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41. (Currently Amended) The method of claim 40, wherein one of ~~said the~~ inverse graphical object ~~and or said the~~ selected graphical object is a bus creator block and the other of ~~said the~~ inverse graphical object and ~~said the~~ selected graphical object is a bus selector block.

42. (Canceled)

43. (Currently Amended) The method of claim ~~[[42]]~~ 37, wherein ~~the step of selecting comprises selecting a morph operation the list is displayed in one of a context menu, a toolbar or a roll-up menu from a context menu displaying a plurality of transformation operations to the user.~~

44. (Currently Amended) The method of claim 37, further comprising:
~~the step of receiving a user command associated with the morph operation prior to the step of executing the morph operation.~~

45. (Currently Amended) The method of claim 44, wherein the ~~user enters the command is~~ received from using a command line mechanism.

46. (Canceled)

47. (Canceled)

48. (Currently Amended) ~~In a graphical modeling environment, a~~ computer-readable medium holding computer-executable instructions, the ~~medium~~ instructions comprising:
one or more instructions for receiving an a user input for selecting a first graphical object in an executable block graphical diagram representing a system, the first graphical object having one or more properties; and
one or more instructions for displaying a list of one or more to the user a plurality of transformation operations to be performed performable on the selected first graphical object for transforming the first graphical object into creating a second graphical object for the executable block diagram;

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one or more instructions for receiving an input for selecting one of the one or more transformation operations; and

one or more instructions for applying the selected one of the one or more transformation operations on the first graphical object for creating the second graphical object, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object derived from the selected graphical object.

49. (Currently Amended) The medium of claim 48, further ~~holding~~ comprising:

one or more instructions for receiving an a user input for selecting one of the a transformation operations from the list plurality of transformation operations; and

one or more instructions for executing the selected transformation operation on the selected first graphical object to create a transformed the second graphical object.

50. (Currently Amended) ~~In a graphical modeling environment, a~~ computer-readable medium holding computer-executable instructions, the medium instructions comprising:

one or more instructions for receiving an a user input for selecting a first graphical object in an executable block graphical diagram representing a system, the first graphical object having one or more properties;

one or more instructions for displaying a list of one or more transformation operations performable on the first graphical object;

one or more instructions for receiving an input for selecting a transformation operation in the list; and

one or more instructions for, based on the selected transformation operation, executing a copy and morph operation on the first graphical object to create a second graphical object for the executable block diagram, derived from the first graphical object, wherein the second graphical object has having one or more properties that are different from the one or more properties of than the first graphical object.

51. (Currently Amended) ~~In a graphical modeling environment, a~~ computer readable medium holding computer-executable instructions, the medium instructions comprising:

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one or more instructions for receiving an a-user input for selecting a graphical object in an executable block graphical diagram representing a system, the selected graphical object having one or more properties;

one or more instructions for displaying a list of one or more transformation operations performable on the selected graphical object;

one or more instructions for receiving an input for selecting a transformation operation from the list; and

one or more instructions for, based on the selected transformation operation, executing a morph operation on the selected graphical object to change one or more properties of the selected graphical object for the executable block diagram, thereby creating a transformed graphical object based on the selected graphical object.

52. (Currently Amended) A system for generating and displaying a modeling application, comprising:

user operable input means for inputting data to the a modeling application;

a display device for displaying an executable block diagram representing a system, the executable block diagram containing a first graphical object, the first graphical object having one or more properties;

receiving means for receiving an input for selecting the first graphical object in the executable block diagram; and

an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including:

instructions for displaying a list of one or more plurality of transformation operations to be performed performable on a the first graphical object, after the user selects the graphical object, for transforming the first graphical object into a second graphical object for the executable block diagram, and

instructions for applying a selected one of the one or more transformation operations on the first graphical object for creating the second graphical object, the second graphical object having one or more properties that are different from the one or more properties of the first graphical object.

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53. (Canceled)

54. (Currently Amended) ~~A system for generating and displaying a modeling application for simulating a dynamic system, comprising:~~

~~user-operable input means for inputting data to the a modeling application;~~

~~a display device for displaying an executable block diagram representing the a dynamic system, the executable block diagram containing a first graphical object having one or more properties;~~

~~receiving means for receiving an input for selecting the first graphical object in the executable block diagram; and~~

~~an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including:~~

~~instructions for displaying a list of one or more of transformation operations performable on the first graphical object, and~~

~~instructions for, based on a selected transformation operation in the list, executing a copy and morph operation on a the first graphical object in the diagram to create a second graphical object for the executable block diagram, based on the first graphical object when a user selects the first graphical object, wherein the second graphical object having has one or more properties that are different than from the one or more properties of the first graphical object.~~

55. (Currently Amended) ~~A system for generating and displaying a modeling application for simulating a dynamic system, comprising:~~

~~user-operable input means for inputting data to the a diagramming application;~~

~~a display device for displaying an executable block diagram representing the a dynamic system, the block diagram containing a graphical object having one or more properties;~~

~~receiving means for receiving an input for selecting the graphical object in the executable block diagram; and~~

~~an electronic device including memory for storing computer program instructions and data, and a processor for executing the stored computer program instructions, the computer program instructions including:~~

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instructions for displaying a list of one or more of transformation operations
performable on the selected graphical object, and
instructions for, based on a selected transformation operation in the list, executing
a morph operation on ~~a~~ the selected graphical object in the diagram to change one or
more properties of the selected graphical object for the executable block diagram.
~~of the selected graphical object when a user selects the first graphical object,~~
~~thereby creating a transformed graphical object based on the selected graphical object.~~